

|                               |                            |                     |  |
|-------------------------------|----------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b>     | <b>Applicant(s)</b> |  |
|                               | 10/606,050                 | GOO, DOO-HOON       |  |
|                               | Examiner<br>L. G. Lauchman | Art Unit<br>2877    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to \_\_\_\_\_.
2.  The allowed claim(s) is/are 1-21.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 6/2003 & 6/2004
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Allowable Subject Matter***

Claims 1-21 are allowed.

The following is an examiner's statement of reasons for allowance:

As to Claim 1, the prior art of record taken along or in combination, fails to disclose or render obvious calculating a correction value for aligning the wafer based on a first difference between the first position and a first predetermined position and a second difference between the second position and a second predetermined position; and aligning the wafer based on the correction value, in combination with the rest of the limitations of the claim.

The dependent Claims 2-9 are allowed by virtue of their dependence upon Claim 1.

As to Claim 10, the prior art of record taken along or in combination, fails to disclose or render obvious a first sensing component that is configured to sense the first diffracted light beam at a first-position; a second sensing component that is configured to sense the second diffracted light beam at a second position; and a position correcting component that is configured to calculate a correction value for aligning the wafer based on a first difference between the first position and a first predetermined position and a second difference between the second position and a second predetermined position, in combination with the rest of the limitations of the claim.

The dependent Claims 11-21 are allowed by virtue of their dependence upon Claim 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Sentoku et al* disclose detecting a relative displacement between first and second diffraction grating by detecting the phase difference between the first and second detection signals. *Suzuki et al* teach alignment process based on using two wavelength beams. *Nose et al* teach a device and method for measuring the positional deviation between diffraction gratings by illuminating the gratings with two light beams and detecting interference light beam from the plurality of diffracted beams. *Ota* discloses an alignment method between a mask and a substrate by determining the relative positions of the first and second alignment marks. *Yoshitake et al* disclose a device and method for measuring a positional difference between a first and a second pattern by using two light sources and calculating the positional difference from a positional difference of images.

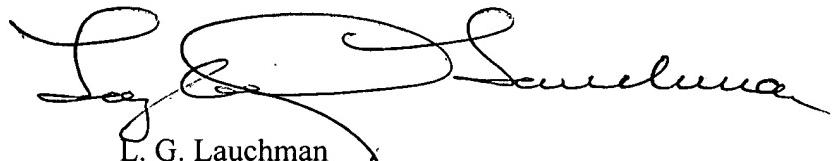
Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (571) 272-2418. The examiner's normal work schedule is 8:00am to 4:30pm (EST), Monday through Friday. If

Art Unit: 2877

attempts to reach examiner by the telephone are unsuccessful, the examiner's supervisor Gregory J. Toatley, Jr. can be reached on (571) 272-2059, ext. 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (571) 272-1562.



L. G. Lauchman  
Primary Examiner  
Art Unit 2877

November 22, 2005